

ATTY. DOCKET NO. 10589-034-999 10/551,300

APPLICANT
Trotta, C. FILING DATE
November 29, 2006 1639

	U.S. PATENT DOCUMENTS					
*EXAMINER INITIAL	,	DOCUMENT NUMBER	DATE	NAME	PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR	
	A01	2006/0269923	11/30/06	Trotta C.		
	A02	2007/0020630	01/25/07	Trotta C.		
	A03	4,987,071	01/22/91	Cech et al.		
	A04	5,093,246	03/03/92	Cech et al.		
	A05	5,310,664	05/10/94	Butow et al.		
	A06	5,354,855	10/11/94	Cech et al.		
	A07	5,439,797	08/08/95	Tsien et al.		
	A08	5,591,610	01/07/97	Cech et al.		
	A09	5,726,195	03/10/98	Hill et al.		
	A10	5,776,738	07/07/98	Dell'Orco Sr.		
	A11	5,939,288	08/17/99	Thomburg		
	A12	5,994,124	11/30/99	Bozzoni		
	A13	6,025,167	02/15/00	Cech et al.		
	A10	6,180,399	01/30/01	Cech et al.		
	A15	6,214,563	04/10/01	Negulescu et al.		
	A16	6,221,587	04/27/01	Ecker et al.		
	A17	6,221,612	04/24/01	Knapp et al.		
	A18	6,232,070	05/05/01	Shuman		
	A19	6,446,032	09/03/02	Schimmel		

FOREIGN PATENT DOCUMENTS						
	FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN)	DATE	NAME	PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR	т	
B01	WO 01/25486	04/12/01	University of Medicine and Dentistry of New Jersey			
B02	WO 01/92463	12/06/01	Istituto di biologia Cellulare, CNR			
 B03	WO 02/83837	10/24/02	Almstead			
B04	WO 02/83953	10/24/02	PTC Therapuetics, Inc.	-		
B05	WO 91/09942	07/11/91	Board of Regents, The University of Texas System			
 B06	WO 98/49274	11/05/98	Appligene-Oncor			

NYI-3914640v3

EXAMINER /Christian Boesen/

DATE CONSIDERED 05/13/2009

	ATTY, DOCKET NO. 10589-034-999	APPLICATION NO. 10/551,300	
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT Trotta, C.		
2	FILING DATE November 29, 2006	ART UNIT 1639	

	FOREIGN PATENT				
	DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN)	DATE	NAME	PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR	
B07	WO 99/20795	04/29/99	Melica HB		L
B08	WO 01/12820	02/22/01	Health Research Institute		
B09	WO 02/40685	05/23/02	Cornell Research Foundations, Inc.		
B10	WO 02/42326	05/30/02	Biota Scientific Management Pty LTD		Г
B11	WO 04/001010	12/31/03	PTC Therapeutics, Inc.		
B12	WO 04/087069	10/14/04	PTC Therapeutics, Inc.		Γ
B13	WO 04/087070	10/14/04	PTC Therapeutics, Inc.		Γ
B14	WO 04/087884	10/14/04	PTC Therapeutics, Inc.		Γ
B15	DE 3436818	04/10/89	Hoechst AG		Γ
B16	CN 1328156	12/26/01	Wuhan Inst Of Virology Chinese		Γ
B17	WO 00/67580	11/16/06	SmithKline Beecham Corp.		Γ

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials		(Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.)	Т
	C01	ABELSON et al., 1998, "tRNA splicing." Journal of Biological Chemistry 273(21):12685-12688	Г
	C02	ADAMS et al., 1991, "Fluorescence ratio imaging of cyclic AMP in single cells." Nature 349:694-697	Г
	C03	BELFORD et al., 1993, "Multiple nucleotide cofactor use by yeast ligase in tRNA splicing. Evidence for independent ATP- and GTP-binding sites" J. Biol. Chem. 268(4):2444-2450	Γ
	C04	BELFORT, M., & WEINER, A., 1997, "Another bridge between kingdoms: tRNA splicing in archaea and eukaryotes." Cell 89(7):1003-1006.	
	C05	BJORK, G., 1995, "Biosynthesis and Function of Modified Nucleosides, in tRNA: Structure, Biosynthesis and Function." D. Soll & U. RajBhandary (eds.), American Society for Microbiology, Washington DC: pp. 165-205	
	C06	DEUTSCHER, M.P., 1995 "tRNA Processing Nucleases, in tRNA:Structure, Biosynthesis and Function." D. Soll and U. RjaBhandary (eds.), American Society for Microbiology, Washington DC: pp. 51-65	
	C07	DIENER & MOORE, 1998, "Solution Structure of a Substrate for the Archael Pre-tRNA Splicing Endonucleases: The Bulge-Helix-Bulge Motif." Mol. Cell. 1:883-894	
	C08	FRUSCOLONI et al., 2001, "Cleavage of non-tRNA substrates by eukaryal tRNA splicing endonucleases." EMBO Rep 2(3):217-221	
	C09	GENBANK: Accession No. NP_079541; "tRNA splicing endonuclease 2 homolog [Homo saniens]"	-
	C10	GENBANK: Accession No: NT_005927.12; "Homo sapiens chromosome 3 reference genomic contig"	
	CU	GENBANK: Accession No: NT 011225.9: "Homo sapiens chromosome 19 reference genomic contig."	Π
	CI2	GENBANK: Accession No: XP 085899: "similar to LENG5 protein [Homo sapiens]."	L
	C13	GOMES et al., 1997, "RNA splicing ligase activity in the archaeon Haloferax volcanii" Biochem & Biophys. Res.	T

NYI-3914640v3

EXAMINER /Christian Boesen/

DATE CONSIDERED

05/13/2009

	ATTY. DOCKET NO. 10589-034-999	APPLICATION NO. 10/551,300	
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT Trotta, C.		
	FILING DATE November 29, 2006	ART UNIT	

		NON PATENT LITERATURE DOCUMENTS	
Examiner	1		Т
Initials	+	(Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) GREER et al., 1982, "Mechanism of action of a yeast RNA ligase in tRNA splicing" Cell 32:537-546	+-
	C14		1
	C15	GREER., 1986, "Assembly of tRNA Splicing Complex: Evidence for Concerted Excision and Joining Steps in Splicing In Vitro." Mol. and Cellular. Bio., 6(2):638-642	L
	C16	HYDE-DERUYSCHER et al., 2000, "Detection of Small-Molecule Enzyme Inhibitors with Peptides Isolated from Phage-Displayed Combinatorial Peptide Libraries." Chem. & Biol. 7:17-25	
	C17	IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. Evol., 2(1):13-34	
	C18	IKEMURA, T. AND OKEKI, H., 1983, "Codon usage and transfer RNA contents: organism-specific codon- choice patterns in reference to the isoacceptor contents." Cold Spring Harbor Symp. Quant. Biol. 47:1087-1097	
	C19	KLEMAN-LEYER et al., 1997, "Properties of H. volcanii tRNA Intron Endonuclease Reveal a Relationship between the Archaeal and Eucaryal tRNA Intron Processing Systems." Cell., 89:839-847	Γ
	C20	LI & ABELSON, 2000, "Crystal Structure of a Dimeric Archaeal Splicing Endonuclease." J. Mol. Biol. 302:639-648.	
	C21	LI et al., 1998, "Crystal structure and evolution of a transfer RNA splicing enzyme" Science 280(5361):279-284	
	C22	LYKKE-ANDERSEN, J. & GARRETT, R.A, 1997, "RNA-protein interactions of an archaeal homotetrameric splicing endoribonuclease with an exceptional evolutionary history." EMBO J 16(20):6290-6300.	I
	C23	PHIZICKY et al., 1986, "Saccharomyces cerevisiae tRNA ligase. Purification of the protein and isolation of the structural gene" J. of Biol. Chem. 261(6):2978-2986	T
	C24	QIN & PYLE, 1999, "Site-specific labeling of RNA with fluorophores and other structural probes." Methods 18 (1):60-70	T
	C25	REYES & ABELSON 1988, "Substrate Recognition and Splice Site Determination in Yeast tRNA Splicing." Cell. 55:719-730	Ţ
	C26	SARKAR & HOPPER., 1998, "tRNA Nuclear Export in Saccharomyces cerevisiae: In Situ Hybridization Analysis." Mol. Biol. of the Cell., 9:3041-3055	T
	C27	SAXENA et al., 1992, "Angiogenin is a Cytotoxic, tRNA-specific Ribonuclease in the RNase A Superfamily." J. of Biol. Chem. 267(30):21982-21986	T
	C28	TROTTA et al., 1997, "The yeast tRNA splicing endonuclease: a tetrameric enzyme with two active site subunits homologous to the archaeal tRNA endonucleases." Cell 89:849-858.	t
	C29	Subunits infinitely to the architect intrive fellowichaess. Cell or 20-97-20-9. TROTTA, C.R. AND ABELSON, J.N., 1999, "IRNA Splicing: An RNA World Add-On or an Ancient Reaction? In RNA world II" Tom Cech, Ray Gesteland and John Atkins (eds.), Cold Spring Harbor Laboratory Press, 561-584	T
	C30	TROTTA., 1999, "The Composition, Function and Evolution of the tRNA Splicing Endonuclease." Thesis, California Institute of Technology, pp.1-147	T
	C31	TSIEN et al., 1993, "FRET for studying intracellular signaling." Trends in Cell. Bio. 3(7): 242-245	t
	C32	VAUGHN et al., 2002, "Methonine In and Out of Proteins: Targets for Drug Design." Curr. Med. Chem. 9(3):385-409	T
	C33	VOLAREVIC et al., 2000, "Proliferation, But not Growth Blocked by Conditional Deletion of 40S Ribosomal Protein S6." Science 288:2045-2047	I
	C34	WANG et al., 1999, "Substrate Masking: Binding of RNA by EGTA-Inactivated Micrococcal Nuclease Resutls in Artifactual Inhibition of RNA Processing Reactions." Nuc. Acids Res. 18(22):6625-6626	T
	C35	WINTER et al., 2000, "RNA polymerase III transcription factor TFIIIC2 is overexpressed in ovarian tumors." Proc. Natl. Acad. Sci., 97(23):12619-12624	T
	C36	XU et al., 1990, "Purification of yeast transfer RNA ligase." Meth. in Enzymol. 181:463-471	T

NYI-3914640v3

EXAMINER /Christian Boesen/ DATE CONSIDERED 05/13/2009

LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. 10589-034-999	APPLICATION NO. 10/551,300	
	APPLICANT Trotta, C.		
	FILING DATE November 29, 2006	ART UNIT 1639	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials		(Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) Vasat Accession No. M32336. SEND. "http://www.yeasterg.com/"	Т
	C37		
	C38	Yeast Accession No: YAR008w; SEN34 "http://www.yeastgenome.org/"	-
	C20	Yeast Accession No: YMR059w: SEN 15 "http://www.yeastgenome.org/"	
	C40	Yeast Accession No: YPL083c; SEN54 "http://www.veastgenome.org/"	
	C41	ZHANG et al., 1997, "Gene Expression Profiles in Normal and Cancer Cells." Science 276:1268-1272	T
	C42	BALDI et al., 1992, "Participation of the intron in the reaction catalyzed by the Xenopus tRNA splicing endonuclease." Science 255:1404-1408.	T
	C43	BARBINO & KELLLER, 1999, "Last but not least: regulated poly(A) tail formation." Cell 99(1):9-11	Г
	C44	BUJNICKI, J.M., & RYCHLEWSKI, L., 2000, "Prediction of a common fold for all four subunits of the yeast tRNA splicing endonuclease: implications for the evolution of the EndA/Sen family." FEBS Lett 486: 328-329.	Γ
	C45	BUVOLI et al, 2000, "Suppression of nonsense mutations in cell culture and mice by multimerized suppressor tRNA genes" Molecular and Cellular Biology 20(9):3116-3124	
	C46	CALVO, O., AND MANLEY, J.L., 2003, "Strange bedfellows: polyadenylation factors at the promoter." Genes Dev 17(11):1321-1327.	
	C47	CHOLAND DREYFUSS, 1984, "Monoclonal antibody characterization of the C proteins of heterogeneous nuclear ribonucleoprotein complexes in vertebrate cells." J. Cell. Biol. 99(6):1997-2004	
	C48	CULVER et al., 1997, "A 2'-phosphotransferase implicated in tRNA splicing is essential in Saccharomyces cerevisiae." J Biol Chem 272:13203-13210.	L
	C49	DE VRIES, H. et al., 2000, "Human pre-mRNA cleavage factor II(m) contains homologs of yeast proteins and bridges two other cleavage factors." EMBO J 19:5895-5904.	ļ
	C50	FABBRI, S et al., 1998, "Conservation of substrate recognition mechanisms by tRNA splicing endonucleases." Science 280, 284-286.	1
	C51	FRANK & PACE, 1998, "Ribonuclease P: unity and diversity in a tRNA processing ribozyme." Annu Rev Biochem 67, 153-180.	1
	C52	GANDINI-ATTARDI, et al., 1990, "Transfer RNA splicing endonuclease from Xenopus laevis." Methods Enzymol 181:510-517.	
	C53	HIROSE AND MANLEY, 2000, "RNA polymerase II and the integration of nuclear events." Genes Dev., 14(12):1415-1429	
	C54	HOPPER, A.K., AND PHIZICKY, E.M., 2003, "tRNA transfers to the limelight." Genes Dev 17(2):162-180.	1
	C55	HUH, et al., 2003, "Global analysis of protein localization in budding yeast." Nature 425:686-691.	1
	C56	JACOBSON et al., 1997, "Nuclear domains of the RNA subunit of RNase P." J Cell Sci. 110 (Pt 7):829-837.	1
	C57	LASK1, F.A. et al., 1983, "Characterization of tRNA precursor splicing in mammalian extracts." J Biol. Chem. 258(19):11974-11980.	
	C58	MINVIELLE-SEBASTIA, L. & KELLER, W., 1999, "mRNA polyadenylation and its coupling to other RNA processing reactions and to transcription." Curr. Opin. Cell. Biol. 11:352-357	
	C59	O'CONNOR, J.P., & PEEBLES, C.L., 1992, "PTA1, an essential gene of Saccharomyces cerevisiae affecting pre-tRNA processing." Mol Cell Biol 12:3843-3856.	
	C60	OTSUKA, et al., 1981, "Ribonuclease 'Xlal' an activity from Xenopus laevis oocytes that excises intervening sequences from yeast transfer ribonucleic acid precursors." Mol Cell Biol 1:269-280.	
	C61	PARK & BHANDARY, 1998, "Tetracycline-regulated suppression of amber codons in mammalian cells." Mol. & Cell. Biol. 18:4418-4425	

NYI-3914640v3 EXAMINER

/Christian Boesen/

DATE CONSIDERED

05/13/2009

LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. APPLICATION NO.				
	10589-034-999	10/551,300			
	APPLICANT				
	Trotta, C.				
	FILING DATE	ART UNIT			
	November 29, 2006	1639			

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	T	(Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.)	т
	C62	PREKER et al., 1997, "A multisubunit 3"-end processing factor from yeast containing poly(A) polymerase and homologues of the subunits of mammalian cleavage and polyadenylation specificity factor." EMBO J 16:4727-4737.	
	C63	PROUDFOOT, 2000, "Connecting transcription to messenger RNA processing." Trends Biochem Sci. 2000 Jun;25(6):290-3. Review.	
	C64	RAUHUT et al., 1990, "Yeast tRNA-splicing endonuclease is a heterotrimeric enzyme." J Biol. Chem. 265(30): 18180-18184.	
	C65	REYES et al., 1987, "A synthetic substrate for tRNA splicing." Anal. Biochem. 166(1):90-106	T
	C66	STANDRING et al., 1981, "Yeast tRNA3Leu gene transcribed and spliced in a HeLa cell extract." Proc. Natl. Acad. Sci. USA 78(10):5963-5967.	
	C67	TAKAGAKI et al., 2000, "Complex protein interactions within the human polyadenylation machinery identify a novel component." Mol. Cell. Biol. 20:1515-1525.	
	C68	TAKAKU et al., 2003, "A candidate prostate cancer susceptibility gene encodes tRNA 3' processing endoribonuclease." Nucleic Acids Res 31(9):2272-2278.	
	C69	WAHLE & RUEGSEGGER, 1999, "3'-End processing of pre-mRNA in eukaryotes." FEMS Micro Rev., 23(3):277-295	
	C70	WALLACE et al., 1999, "Two distinct forms of the 64,000 Mr protein of the cleavage stimulation factor are expressed in mouse male germ cells." Proc. Natl. Acad. Sci. 96(12):6763-6768	
	C71	XIAO et al., 2002, "Eukaryotic ribonuclease P: a plurality of ribonucleoprotein enzymes." Annu Rev Biochem 71, 165-189.	
	C72	YOSHIHISA et al., 2003, "Possibility of cytoplasmic pre-tRNA splicing: the yeast tRNA splicing endonuclease mainly localizes on the mitochondria." Mol Biol Cell 14(8):3266-3279.	
	C73	ZHAO, 1999 "Formation of mRNA 3' ends in eukaryotes: mechanism, regulation, and interrelationships with other steps in mRNA synthesis." Microbiol. Mol. Biol. Rev. 63:405-445	
	C74	MIAO et al., 1993, "Yeast tRNA-splicing endonuclease cleaves precursor tRNA in a random pathway," J. Biol. Chem. 268(1):672-7	

NYI-3914640v3

EXAMINER /Christian Boesen/ 05/13/2009 DATE CONSIDERED